

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in view of the above amendments and in light of the following discussion, is respectfully requested.

Claims 9-18 are pending in the Application. Claim 9 is currently amended. Claims 1-3 and 7-8 are canceled without prejudice or disclaimer. Claims 10-18 are newly presented. Support for the amendment of Claim 9 can be found in original Claims 1 and 3. Further support for the amendment of Claim 9 can be found in paragraph [0029] of the Specification as originally filed and in Figure 7 of the drawings. Support for new Claims 10-12 can be found in original Claims 4, 6, and 8 respectively. Support for new Claims 13-14 can be found in paragraph [0038] of the Specification as originally filed. Support for new Claims 15-16 can be found in paragraph [0039] of the Specification as originally filed. Support for new Claim 17 can be found in paragraph [0013] of the Specification as originally filed. No new matter is introduced. Support for new Claim 18 can be found in paragraph [0025] of the Specification as originally filed.<sup>1</sup> The Specification is currently amended to address an informality discovered during review of the file. Support for the amendment to the Specification can be found in original Claim 3, for example.

The outstanding Office Action rejected Claims 1-3 and 7-8 under 35 U.S.C. § 103(a) as unpatentable over Harada (JP 2001-212632). Claim 9 was rejected under 35 U.S.C. § 103(a) as unpatentable over Chikaraishi (U.S. Patent No. 6,464,254).

Amended Claim 9 recites a gas generator for an airbag including an elongated cylindrical tube and a partition plate which partitions the tube in the axial direction into a combustion compartment and a hollow cylindrical filter chamber. Amended Claim 9 also recites that the *partitioning plate is made of metal higher in hardness than that of the tube*. Amended Claim 9 further recites that partitioning plate has a first thickness portion and a

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<sup>1</sup> The Applicants note that the term "stretch" in the Specification as originally filed would be understood by one of ordinary skill in the art to refer to "elongation."

*second thickness portion, which is smaller in thickness than the first thickness portion.*

Furthermore, the *second thickness portion is a leading end of a portion that bites into the wall of the tube.* Amended Claim 9 recites that the partitioning plate is *tapered from the first thickness portion to the second thickness portion*, such that the partitioning plate becomes thinner towards the second thickness portion.

As noted in the Specification as originally filed, the Applicants recognized that a gas generator as described in amended Claim 9 presents several advantages over the conventional arrangements. For example, a gas generator that includes a partition plate that is higher in hardness than the tube can be crimped such that “no substantial gap is formed between the inside face of the tube and the partitioning plate. This can produce an improved airtight tube.”<sup>2</sup> Also for example, the gas generator of amended Claim 9 can be produced with a decreased amount of components and processes.<sup>3</sup>

Turning to the applied references, Figure 1 of Harada illustrates a board (2) inserted into a shell (1) which is crimped together.<sup>4</sup> Harada states that the board (2) is made of 600 N high-strength steel and the shell (1) is made of 800 N high-strength steel.<sup>5</sup> As can be seen by Figure 1 of Harada, the board (2) is a uniform thickness and sits flush against the shell (1), prior to being crimped. Figure 1 of Harada also illustrates that after crimping, an opening (P) is produced between an inner surface the shell (1) and the board (2).<sup>6</sup> Because of the opening (P), the board (2) is then struck simultaneously on each side by tool (4) which includes annular striking pressure part (4a).<sup>7</sup> The striking by tool (4) causes the board (2) to diametrically extend to fill the opening (P).<sup>8</sup> However, Harada does not suggest or disclose a partitioning plate [i] that is made of a metal higher in hardness than that of the tube or [ii] that

<sup>2</sup> See, the Specification as originally filed at paragraph [0012].

<sup>3</sup> See, the Specification as originally filed at paragraph [0013].

<sup>4</sup> See, Harada at par. [0010], JPO machine translation.

<sup>5</sup> See, Harada at par. [0009], JPO machine translation.

<sup>6</sup> See, Harada at par. [0011], JPO machine translation.

<sup>7</sup> See, Harada at par. [0012], JPO machine translation.

<sup>8</sup> See, Harada at par. [0013], JPO machine translation.

includes a taper from a relatively thinner second thickness, which bites into the wall, to a relatively thicker first thickness.

With respect to [i] above, Harada states that the board (2) is composed of 600 N high strength steel and the *shell (1)* is composed of *harder* 800 N high-strength steel. By comparison, amended Claim 9 recites that the *partitioning plate* is made of a metal that is *higher hardness* than that of the tube. Accordingly, Harada does not suggest or disclose all of the features of amended Claim 9.

With respect to [ii] above, Harada illustrates a board (2) with a uniform thickness prior to processing. Furthermore after being crimped and struck by the tool (4), Harada illustrates that the board (2) is relatively *thick* where it joins shell (1), it then waists down at the strike point (5), and then is relatively thick again. By comparison, the partitioning plate of amended Claim 9 includes a relatively *thin* second thickness, that bites into the tube, which tapers to a relatively thick first thickness. A board that is *thick where joined to the shell* and then waists to a thin portion is not equivalent to a *relatively thin second thickness, that bites into the tube*, and tapers to a relatively thick first thickness. Accordingly, Harada does not suggest or disclose all of the features of amended Claim 9.

Chikaraishi fails to cure the deficiencies of Harada. Figure 1 of Chikaraishi illustrates an inflator (1) including a cylindrical body (3) and a partition (5).<sup>9</sup> Chikaraishi states that by crimping, to reduce the diameter of body (3), and by coining, to increase the diameter of partition (5), the partition (5) is strongly fixed to the body (3).<sup>10</sup> Figure 3A illustrates that the partition (5) is of uniform thickness prior to processing.<sup>11</sup> Chikaraishi states that after the coining process “the outer diameter of the partition (5) is increased by an amount about 0.5 mm.”<sup>12</sup> However, Chikaraishi does not suggest or disclose a partitioning plate [i] that is

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<sup>9</sup> See, Chikaraishi at col. 5, ll. 10-13.

<sup>10</sup> See, Chikaraishi at col. 5, ll. 31-35.

<sup>11</sup> See, Chikaraishi at col. 5, ll. 39-40.

<sup>12</sup> See, Chikaraishi at col. 6, ll. 17-18.

made of a metal higher in hardness than that of the tube or [ii] that includes a taper from a relatively thinner second thickness, which bites into the wall, to a relatively thicker first thickness.

With respect to [i] above, Chikaraishi is silent regarding the relative hardness between the partition (5) and the body (3). By comparison, amended Claim 9 recites a partitioning plate which is made of a metal higher in hardness than that of the tube. Furthermore, Chikaraishi uses the same method described in Harada to affix the partition to the body. This process implies that the body is, in fact, harder than the partition. Accordingly, Chikaraishi does not suggest or disclose all of the features of amended Claim 9.

With respect to [ii] above, Chikaraishi, like Harada, illustrates a partition that is *relatively thicker where it meets the body*. Chikaraishi discloses that the coining process increases the diameter of the partition by 0.5 mm where the partition meets the body. By comparison, amended Claim 9 recites a partitioning plate including a second thickness that is *relatively thin where it meets the tube* and tapers to a first thickness. Accordingly, Chikaraishi does not suggest or disclose all of the features of amended Claim 9.

Based on the foregoing, even the combined teachings of Harada and Chikaraishi do not suggest or disclose all of the features of amended independent Claim 9. Accordingly, the Applicants respectfully submit that amended Claim 9 is in condition for allowance.

New dependent Claims 10-18 are respectfully submitted to be in condition for allowance for at least the same reasons as amended Claim 9 from which they depend. Moreover, dependent Claims 10-18 recite additional features not suggested or disclosed by the cited references.

For example, new dependent Claim 13 recites the feature of an orifice provided to the partitioning plated that communicates with the hollow cylindrical filter chamber. Furthermore, new dependent Claim 14 depends from new Claim 13 and recites a seal

member which is adhesively bonded to the partition plate to close the orifice and bursts when the gas generant is burned. Both Harada and Chikaraishi are silent with respect to an orifice formed in a partition that is covered by a seal that bursts when the gas generant is burned.

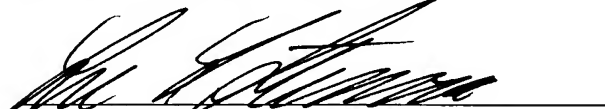
Accordingly, new Claims 13 and 14 are submitted to be in condition for allowance.

For the reasons discussed above, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. Therefore, a Notice of Allowance for Claims 9-18 is earnestly solicited.

Should Examiner Fleming deem that any further action is necessary to place this application in even better condition for allowance, she is encouraged to contact the Applicants' undersigned representative at the below-listed telephone number.

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